Managing Birds in New York

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New York State is home to 454 species of birds, 242 of which have bred in New York. Some species, such as black-capped chickadees and tufted titmice, are permanent residents and live here year-round. Others breed in New York during the spring and summer and migrate to sunny South or Central America to spend the winter. These birds, such as the wood thrush, ovenbird, and warblers, are called "Neotropical migrants". Other birds, such as the American robin or rufous-sided towhee, breed in New York and migrate to a more southerly state for the winter. Such birds are termed "short-distance migrants". A number of species, such as the tundra swan or black-bellied plover, migrate through New York on their way from their winter grounds to their breeding grounds and simply use the State as an occasional rest area. Once in a while, an individual bird or flock of birds that have no official place in New York are blown off-course en route to their destination and we are fortunate enough to be able to view them. Such birds, like the northern wheatear and yellow-billed loon, are termed "accidental" and are a rare site to behold.

New York has a variety of landforms with a diversity of topographic and climatic conditions. Because of the diversity of New York's physical environment, from the Atlantic Ocean to the Great Lakes, the coastal lowlands of Long Island to the high peaks of the Adirondacks, the state supports a variety of vegetation types and provides habitat for many different kinds of birds. If you want to view the whole host of species that reside in New York, you will need to do some traveling. However, your backyard, forest land or open field may support dozens of bird species and provide endless opportunities for observation without leaving home at all!

Guilds

A guild is a group of animals within a community (e.g., deciduous forest, meadow, emergent wetland) that uses similar resources in similar ways. Birds are often placed into guilds based on their food preference or feeding habits. For example, some birds eat seeds (gramnivores), some are insect-eaters (insectivores), and others are fruit-eaters (frugivores). Some insectivores glean insects from the foliage of vegetation, while others "hawk" insects from the air. Some birds feed at ground level, while others feed in the forest canopy or sub-canopy. Birds are also placed into guilds based upon their nesting habits. For instance, some birds build their nests on the ground, some locate their nests in the forest canopy, some nest in shrubs, and others nest in tree cavities. Thinking of birds in terms of the guilds that they belong to helps us to understand the reasons that a particular bird or group of birds may or may not be present in a particular habitat.

Habitat Types

Your property may contain a variety of habitat types including forest, shrubland, grassland, or wetlands. The habitat type will largely determine the kinds of birds that live

there. For example, red-eyed vireos, scarlet tanagers and black-throated green warblers live in the forest. Indigo buntings, gray catbirds and song sparrows prefer shrubland. Grassland, such as hayfields, pastures, and fields at airports, support species such as the eastern meadowlark, vesper sparrow, savannah sparrow, and bobolink.

Habitat Structure

In addition to the type of habitat that is present, the structure of the habitat also will influence the kinds of birds inhabiting an area. For instance, within grassland habitat, eastern meadowlarks prefer grass-dominated fields with thick layer of dead grass and scattered shrubs and forbs for perches. Bobolinks nest in older grassland where vegetation is sparser and dominated by grass and there is a mix of forbs and small shrubs. Grasshopper sparrows prefer fields with short bunch grasses, patches of bare ground, and shrubs or fences for perching. Each of these species prefers grassland habitat with a slightly different structure.

Likewise, vertical structural diversity and patch diversity are very important considerations in managing for forest birds. Vertical structural diversity refers to a forest with a well-developed overstory, understory, shrub, and herbaceous layer. Maintaining vertical complexity within the forest allows a variety of birds to coexist. Many birds divide habitat vertically. For example, ovenbirds, scarlet tanagers, and chickadees are all found in mature forests, but ovenbirds feed mostly on the ground, tanagers prefer the canopy top, and chickadees like intermediate heights. More species are able to coexist in a forest with multiple layers than in a forest where all the trees are the same height. Vertical diversity is greatest in forests with a large variety of trees of different ages. Within similar forests, vertical diversity is greater in areas with few deer. Large deer populations often browse and remove the lower layers of vegetation.

Horizontal diversity, or patchiness, refers to the variety, size, and shape of both living and nonliving organisms across an area. Typically, the greater the horizontal diversity, the greater the diversity of birds. Patches can be created by groups of trees of different age and size classes, stands of different types of trees (coniferous versus deciduous), or openings in the forest canopy. Patches may be created naturally (e.g. fire, wind-throws), or they can be created through active forest management.

Other special features within a habitat can provide additional elements that benefit birds. For instance, rotting logs on the ground attract insects and fungi, providing food for birds. Standing snags provide cavities for nesting and additional feeding sites.

Area Requirements

Many migratory songbirds require very large areas of habitat. Such birds are termed area-sensitive species. Typically, area-sensitive species are thought to be forest inhabitants. However, some grassland species, such as the upland sandpiper or Henslow's sparrow, require grassland areas of 100 acres or more. Most area-sensitive grassland species in New York have declined significantly over the past 30 years, due to a decline in the amount of large, contiguous acreage of grassland habitat available for nesting. This loss of habitat was predominately due to changes in agricultural technology

including earlier and more frequent mowing, reversion of farmland to forest, and suburban development.

Area-sensitive forest songbirds, such as the ovenbird, red-eyed vireo, and scarlet tanager, may be absent from small forest patches and reach their greatest abundance in forested areas greater than 250 acres. When larger forests are fragmented into several smaller forests, the habitat needs of these species may not be met, and they may become less abundant or absent altogether. Forest fragmentation results primarily from human modification of the environment. When large forests are fragmented into several smaller forest areas by suburban development or agricultural activity, several changes occur. First, the proportion of edge habitat increases. Subsequently, densities of nest predators such as the American crow, common grackle, raccoon, and opossum increase. These species prey upon both eggs and nestlings. Populations of the brown-headed cowbird, a brood parasite, also increase. Cowbirds never build their own nests but instead lay their eggs in the nests of other birds, which often raise the cowbird young at the expense of their own. Because the cowbird is a relatively "recent" immigrant from the midwest, many eastern forest songbirds have not evolved behavioral strategies to be able to cope with brood parasitism.

Habitat Mixture

Although some species require extensive areas of forest, others need a mixture of habitat types. The wild turkey requires several habitat types and a flock of turkeys may use thousands of acres during the year to meet its needs. For example, they display in fields or open woods during the spring breeding season. Turkeys often nest in brush piles created from logging harvests or blow-downs. During the spring and summer, turkeys feed on grasses, forbs, seeds, and insects found in fields and forest clearings. However, in the fall, they feed in mature forests containing mast-producing trees, such as oak and beech. Fruits of dogwood, grape and black cherry also serve as fall food for turkeys. During winter they rely on fruits and nuts left over from fall and on green plants and insects found in and around spring seeps, where groundwater emerges at the surface along hillsides and lower slopes.

Observing Birds on Your Property

As noted, the types of birds that will inhabitat your property will depend upon the type of habitat, habitat structure, and size of the area. As time goes by and plant succession progresses, bird communities will change. Species that were once common may no longer be present or may be less abundant. New species will appear. Habitat management can help to maintain habitat for a specific species or groups of species. For example, periodic mowing or burning can be used to keep fields from succeeding to shrubland. Timber harvest can be used to create early successional forest or forest openings. Timber stand improvement can be used to allow more light into the forest floor, encouraging the growth of shrubs and understory trees, and increasing vertical diversity. Snags can be left whenever possible to provide homes for cavity-nesting birds.

To safeguard habitat for area-sensitive species, you can avoid creating edge habitat. For area-sensitive grassland birds, fields can be maintained in a shape that will

minimize the amount of edge. For instance, square fields have less edge than long, thin rectangular fields. When clearcutting, manage in large blocks of 40 acres or more, if possible. Many species that inhabit early-successional shrub/sapling habitat do better in large clearcuts, and one large clearcut will create less forest edge than several small clearcuts. When large clearcuts mature, they then provide large blocks of habitat for mature-forest birds.

One of the easiest ways to improve bird habitat on your property is to favor trees and shrubs that produce seeds or fruit. Juneberries, dogwoods, sumac, elderberries, cherries, grapes and blueberries all produce fruit that will be eaten by birds. Birch, alder, and hemlock are just a few species that produce seeds eaten by birds. Food-producing trees and shrubs can be planted or, if they are already present, can be encouraged to grow. Most fruit-producing shrubs require some sunlight to produce fruits. Thinning of mature trees can allow more sunlight to penetrate to the forest floor or understory, thereby increasing fruit production.

Summary

There is no one correct way to manage for birds on your property. An unlimited number of options exist, none of which will benefit all species. Management practices that encourage some birds will discourage others from using an area.

If your property contains habitat that is of special value to birds, such as a 100-acre grassland field, a wetland, or other habitats that are rare or unusual in New York, focus on maintaining those areas. Of the bird species that are decreasing in the northeastern United States, 76 percent inhabit grassland or shrubland habitat. Since the early part of this century, a great deal of farmland has been abandoned and much of the open land that once existed has grown into forest. Therefore, if your property contains grassland or shrubland habitats, you might try to maintain them. In addition, you could manage your property in the context of the surrounding region. For instance, do you have the only large, contiguous area of forest in the area? Although the amount of forest land has increased since the beginning of the century, suburban development has fragmented our forests into smaller habitat islands. By maintaining large, unfragmented forests, you can contribute to the regional diversity of birds by carefully managing your forest to minimize fragmentation.

Consider the needs of birds in your timber plans. For instance, maintain snags and downed logs whenever possible, and encourage vertical diversity when practical. Manage stands to include a diversity of tree species to provide a variety of food and nesting options. By considering the needs of bird when you manage your property, you will be rewarded with endless opportunities for observation, the ecological benefit of insect pest control, and the satisfaction of knowing that you are helping to safeguard the future of New York’s birds.

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